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A Summary of Current Programs

and Report of Progress

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FOREIGN DEVELOPMENT AND TRADE DIVISION

of the

ECONOMIC RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

and related work of the

STATE AGRICULTURAL EXPERIMENT STATIONS

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CURRENT SERIALS SECTION

This report is primarily a tool for the use of scientists and administrators in program coordination, development and evaluation; and for use of advisory committees in program review and development of recommendations for future research programs.

The summaries of progress on U.S.D.A. research include some tentative results that have not been tested sufficiently to justify general release. Such findings, when adequately confirmed, will be released promptly through established channels. Because of this, the report is not intended for publication and should not be referred to in literature citations. Copies are distributed only to members of Department Staff, Advisory Committees and others having a special interest in the development of public agricultural research programs.

This summary includes a list of publications reporting results of research completed in the Foreign Development and Trade Division, Economic Research Service, U.S.D.A. between October 1, 1965 and September 30, 1966. Current research findings are also published in Agricultural Economics Research; Foreign Agricultural Trade of the United States; and Foreign Gold and Exchange Reserves.

UNITED STATES DEPARTMENT OF AGRICULTURE

Washington, D. C. 20250

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INTRODUCTION

Foreign development and trade research is concerned with four areas: effects of foreign economic development on agriculture; appraisal of agricultural export programs and market development; international monetary and trade analysis; and the analysis and evaluation of United States and world agricultural trade. The research objectives include appraisal and evaluation of the economic implications of policies and programs on U.S. foreign trade in agricultural products and the efficient use of U.S. produced food and other resources in economic development programs abroad. This information is employed in the formulation of national policies, positions, and programs in the four areas set forth above.

Research on foreign economic development and trade is carried out in the Foreign Development and Trade Division of the Economic Research Service of the U.S. Department of Agriculture. During the period of this report--October 1, 1965 to September 30, 1966--approximately 30 scientist man-years were devoted to research in the areas of foreign economic development and trade research, distributed as follows: 9.8 man-years to Effects of Foreign Economic Development on Agriculture; 2 man-years to Export Programs and Market Development; 7 man-years to International Monetary and Trade Research; and 10.5 man-years to Trade Statistics and Analysis.

Exports of agricultural products are of major importance to U.S. agriculture and to the U.S. balance of international payments. Total agricultural exports in 1965-66 reached a record level of \$6.7 billion. The foreign market has become increasingly important to American agricultural producers in the past few years. Approximately 78 million acres were required to produce the agricultural commodities exported in fiscal year 1966, up 39 percent from 1958-60. Crop production from one out of every 4 harvested acres now is exported.

A few examples from the research areas covered in this report are presented here.

Agricultural Exports Rose to a Record \$6.7 Billion in Fiscal Year 1965-66.

Continuing analysis of the current status of and outlook for U.S. agricultural exports reveals that exports for the fiscal year ending June 30, 1966, totaled \$6,681 million, up \$584 million from the previous record of \$6,097 million in

fiscal year 1964-65. Record exports of feed grains, wheat and flour, and soybeans contributed most to the total gain. Exports of cotton were down 34 percent from the previous year. The value of tobacco exports was unchanged. Commercial sales for dollars accounted for over three-fourths of total agricultural exports in fiscal year 1965-66. Dollar sales advanced to a record \$5.1 billion, up nearly \$700 million from the previous year's total of \$4.4 billion. About one-fifth of the dollar sales were assisted by export payments, about the same as in the previous year. Exports under the Food for Peace program declined to an estimated \$1.6 billion in 1965-66 from \$1.7 billion in 1964-65. Export programs represented 24 percent of total exports in 1965-66 compared with 27 percent in the preceding year. Since the inception of Public Law 480 in July 1954, a total of \$18 billion of farm products has been exported under Government-financed programs. Economic analyses show that rapid economic growth in Western Europe and Japan has contributed to the record level of agricultural exports. Growth in per capita incomes has strengthened the demand for livestock products, which in turn, has resulted in a sharp increase in the demand for U.S. feed grains, soybeans, oilcake and meal. The greater purchasing power in these industrialized countries has also created a substantial demand for U.S. hides and skins, fruits and vegetables, variety meats, and other agricultural products.

Agricultural Exports Help U.S. Balance of Payments. A research analysis shows that the U.S. balance of payments problem would be much worse were it not for the significant contribution made by U.S. agricultural exports. During 1960-65, the value of total U.S. agricultural exports rose from \$4.8 billion to \$6.2 billion. Besides U.S. exports of agricultural commodities for dollars, there are also imputed dollar earnings and dollar repayments on prior Title IV P.L. 480 credits arising from U.S. agricultural exports under Government programs. These combined with commercial sales agricultural products totaled \$5,062 million in 1965, up 45 percent from 1960. In fiscal year 1966 total agricultural exports were \$2.3 billion larger than total agricultural imports.

Agricultural Exports to the European Economic Community (EEC) Advanced 16 Percent in Fiscal Year 1965-66. U.S. agricultural exports to the European Economic Community rose to \$1,593 million in fiscal year 1965-66 from \$1,371 million a year earlier. Most of the increase resulted from a substantial rise in exports of commodities subject to the EEC system of variable levies. Exports of variable levy commodities totaled \$737 million in 1965-66 compared with the previous year's \$529. Exports of commodities not subject to variable levies totaled \$856 million compared with the previous year's \$842 million.

Markets for Oilseeds in European Economic Community (EEC) Expected to Increase. A study of demand for soybeans, other oilseeds, and oilseed products in the EEC shows that markets for these products will increase in the next few years. Annual consumption of oilseed meals in the EEC averaged 5.1 million tons in 1962-63, more than double the annual average for 1954-56. In 1970, consumption is expected to be 8.2 to 8.8 million metric tons. EEC import policies for

oilseeds remain favorable and internal prices favor increased feeding of protein supplements.

U.S. Feed Grain Exports to Developing Countries Increase Rapidly. Developing countries with per capita incomes of \$200 to \$400 a year have increased their imports of U.S. feed grains from less than \$50 million in 1959-60 to over \$350 million in 1964-65. Japan and Italy are outstanding examples of countries where capacity to import U.S. farm products has increased because of income growth. Analysis of foreign markets in the developing countries shows that consumer demands for livestock products go up rapidly as per capita incomes rise. Additional imports of feed grains are required by most of these countries to expand livestock and poultry production.

Wide Variation Among Countries in Farm Prices of Grains. A study of international price patterns for grains indicates that farm support prices of wheat average much lower in exporting countries such as Argentina, Australia, Canada, and the United States than they do in importing countries such as Belgium, Netherlands, Germany, and Japan. With some exceptions, price support levels for grains are lower in the less developed countries of Asia and Latin America than they are in Western Europe and Japan. Importing countries regulate prices and flows of grain imports and insulate domestic producers from import competition. Since farm production costs are relatively high in the importing countries, support prices also are established at relatively high levels in order to assure as high a degree of self-sufficiency as possible. Although a general relaxation of trade barriers by the importing countries would facilitate the international movement of grains, the restrictive trade policies are not expected to reverse the basic factors contributing to the growing gap between domestic grain production and requirements in the importing countries.

Factors Affecting Agricultural Productivity in Developing Countries. Research carried out in cooperation with the Agency for International Development shows that a wide variety of conditions influence gains in agricultural output and productivity. A study of changes in agriculture in 26 developing countries, published in the last year, reports that 12 of the 26 countries had compound rates of increase in crop production of more than 4 percent a year. Rapid rates of increase in crop output have not happened just as a consequence of normal economic and social processes in societies organized on a laissez-faire basis. Rather they have been undergirded by aggressive group action, generally national in scope, directed specifically to improving agricultural production conditions. Within appreciable limits, land, labor, improved seeds, fertilizers, improved human skills, improved organization, and other such factors can be substituted for each other in agricultural production. These substitution possibilities enhance the opportunities and help simplify the task of increasing agricultural output and productivity in the less developed countries.

Large Gains in Agricultural Productivity in Greece and Taiwan. Detailed country studies in Greece and Taiwan carried out in cooperation with the Agency for International Development show that these countries have achieved large gains in agricultural productivity. In Greece, total agricultural output doubled during the 1948-1963 period. Total agricultural inputs of land, labor, and capital increased about one-fourth and overall productivity in agricultural production increased nearly 50 percent. In Taiwan, total agricultural output was 3.5 times larger in 1956-60 than in 1911-15. Total agricultural inputs doubled, overall productivity in agriculture increased 60 percent. Increased use of fertilizer made possible through expansion of agricultural credit programs was a major factor contributing to increased production efficiency in Greece. Several favorable conditions including increased use of fertilizer, improved crop varieties, better use of water for irrigation, education programs, price incentives, credit and marketing facilities, and nationally planned and administered agricultural development programs contributed to increased production efficiency in Taiwan.

As a step toward implementation of the recommendations for a National Program of Research for Agriculture made jointly by the Association of State Universities and Land Grant Colleges and the USDA, a section has been added to each of the Areas in this report. It comprises a list of the related publications of the State Agricultural Experiment Stations in addition to those heretofore reported covering the results of USDA and cooperative research. In future years, it is anticipated that information will be available to permit reporting of achievements resulting from State research in a format comparable to the present reporting of the USDA and cooperative research.

AREA NO. 1

EFFECTS OF FOREIGN ECONOMIC DEVELOPMENT ON AGRICULTURE

Problem. Economic improvement of agricultural production and marketing is a major objective of development plans of low income countries. Generally, in these countries agriculture accounts for 60-80 percent of total employment and a third or more of national income. Research is needed to provide a more accurate measure of progress made in improving agricultural output and productivity under such plans and to provide a broader basis for gauging the effects of outside assistance, especially on production, consumption and trade in farm products. Many foreign countries are reappraising or revising their agrarian structures, an issue which is becoming increasingly important in most underdeveloped countries and in which the U.S. Government is taking an increasing interest. Research is needed to analyze systematically and continuously the problems inherent in the present system of land and water resource use, tenure and other agrarian institutions in these countries, and to bring out the probable effects of changes in the land system on economic growth, agricultural development, and trade in farm products. Research also is needed to determine the extent and nature of world markets for agricultural exports from less developed countries. Farm production, price, and marketing programs and policies of foreign countries have important impacts on foreign trade and market outlets for U.S. farm products. Comprehensive study of these programs and policies is needed to provide an informed basis for evaluating their effects on economic growth and development of agriculture as well as of the national economy of foreign countries and for expanding market prospects for U.S. farm products.

PROGRAM

A. Factors Associated With Changes in Agricultural Output and Productivity. In many countries, slow growth in the agricultural sector has retarded the rate of growth in the total economy. Because the agricultural sector accounts for a large part of total economic activity in the developing countries, it is important that growth in this sector occur at a high and sustained rate. This area of work is concerned with identifying and analyzing the processes by which developing countries made the transition from low to high levels of agricultural output and productivity. Intensive studies of agricultural development processes are being made in seven countries (Taiwan, Greece, India, Mexico, Nigeria, Brazil, and Colombia). In addition, comparative analyses are being carried out by Washington-based staff members.

Research is directed toward the following four objectives: (1) To describe and compare changes and differences in levels of agricultural output and input and to measure the productivity of important input factors in the agricultural sector of the seven study countries; (2) to identify the major inputs

and institutional conditions accounting for differences in levels and rates of change in output and productivity in the study countries and to determine the share that each of these contributed to increased output. The purpose here is to explain how agricultural output was increased including the effects of changes in the level and combination of inputs; (3) to determine why changes occurred in the level and combination of inputs used to identify the forces that caused farmers to change their production processes, and to determine the relative importance of these forces as change agents for the different conditions existing within the intensive study countries; and (4) to analyze the potentials for improved institutional arrangements and resource use so that development plans and programs can be designed to include those aspects that lead to increased agricultural output and productivity.

The analysis of factors affecting agricultural output and productivity in the seven study countries will be sufficiently comprehensive to permit the construction of general models that can serve as a basis for guiding countries in formulating programs and policies to speed-up rates of increase in agricultural output and productivity.

This research project is being conducted in cooperation with the Agency for International Development.

B. Role of Agriculture in Foreign Economic Development Programs. Although the importance of agriculture's contributions to national economic growth is generally recognized, adequate knowledge about the role of agriculture in stimulating national economic growth is lacking. More knowledge is needed about the growth process before national development programs can be improved. Research under this project includes the determination and measurement of agriculture's contribution to economic growth and the relationship of these contributions to the types of development programs needed in countries at different stages of economic growth. The results of these studies will help to establish priorities for development programs and help to evaluate the effects of economic development in less-developed countries on the demand for U.S. farm products, both current and potential.

C. Effects of Economic Development Upon Patterns of Foreign Trade. Rising incomes in many countries have increased their demand on U.S. agricultural products in recent years. Knowledge of how economic growth in countries at different stages of economic development affects the volume and consumption of imports from the United States is needed to estimate the effect of continued economic growth throughout the world on future demand for U.S. exports, both farm and nonfarm. Research under this project is concerned primarily with the determination and measurement of these "income-trade" changes so that the implications and problems of the shifting patterns of foreign trade on American agriculture can be better estimated. Identification and improved measurement of the interrelationships between development and trade is a continuing objective of these studies.

D. Demand for Agricultural Exports of Less-Developed Countries. National development plans in less-developed countries are highly dependent upon foreign exchange earnings. In most countries agricultural exports account for the major share of total foreign exchange earnings. Because national development plans are so dependent upon future levels of foreign exchange earnings, research is needed to identify and measure the factors affecting the demand for the agricultural exports of less-developed countries as a basis for evaluating how this demand might change over the next decade. This project is being conducted in cooperation with the Agency for International Development.

E. Research Grants Under P.L. 480. As of October 1, 1966, P.L. 480 research grants are supporting 11 studies: three in India, four in Israel, two in Finland, one in Spain, and one in Colombia. Two studies in Spain, one in India, and one in Israel are to be activated within the next month. In addition, 28 proposals for research studies originating in seven countries are under consideration. During the past three years, 32 proposals were rejected.

To qualify for grants, proposed studies must have the potential of providing research findings of "direct value to U.S. agriculture." They must contribute to one or more of the following: (1) Improved research methodology and techniques useful in analyzing U.S. agricultural economic problems; (2) help solve U.S. agricultural economic problems, or (3) supplement regular ERS research studies appraising the competitive position of U.S. farm products in foreign markets. Findings from grant studies that analyze important factors and developments affecting agricultural production, consumption and trade in specific countries are of basic importance to the ERS in discharging its functions.

Total Federal scientific effort devoted to research in this area was 9.8 scientific man-years, divided as follows: 6.5 to Factors Associated with Changes in Agricultural Output and Productivity; 0.2 to Role of Agriculture in Foreign Economic Development Programs; 1.7 to Effects of Economic Development Upon Patterns of Foreign Trade; 0.7 to Demand for Agricultural Exports of Less-Developed Countries; and 0.7 to Research Grants under P.L. 480.

F. Program of the State Agricultural Experiment Stations. The States are showing increased interest in the effects of foreign agricultural development on agricultural trade of the United States. However, complete information on research constructed by the States has not been reported. Data that have been supplied indicate that a total of only 0.3 scientific man-years was devoted to research in this area.

REPORT OF PROGRESS

A. Factors Associated With Changes in Agricultural Output and Productivity.

The first phase, consisting of a comparative analysis of recent changes in agricultural output, resource use, and related technological, economic, social and institutional factors in 26 countries, has been completed. The second phase, consisting of intensive analysis of the agricultural development process in seven countries, is well underway. Field work has largely been completed in Taiwan and Greece and draft reports have been prepared. Studies are underway in Mexico, Brazil, Nigeria and India and arrangements have been made to begin a study in Colombia in December 1966. Concurrent with these country activities, a small staff in Washington assists in planning and coordinating individual country studies and in developing a framework for making a comparative analysis of development patterns in the seven study countries.

Findings from the Taiwan study indicate that many factors were closely associated with the rapid rates of increase in agricultural output and productivity: (1) The adoption of improved agricultural practices contributed greatly to increased output. More important however was the development of a deliberate strategy to insure a continuous flow of new improved practices to farmers. The best available technology was sought out in Taiwan. Foreign technology was examined for its suitability to Taiwan conditions. Basic and adaptive research were started and maintained to insure a continuous supply of new technology on a long-term basis. National goals were developed which had acceptance at all levels from top government policy administrators to individual cultivators. Once goals were identified and selected, programs were developed to achieve these goals and these programs were carried through to completion. Accompanying the above steps was effective demand for farm products and a marketing system capable of handling the increased output. There was effective communication of needs, goals and benefits among producers, consumers and government so that each group could relay its needs to the other groups. Underlying all this was an intense national will to develop. This strong desire was coupled with the interlocking of both planning and executing agencies, so that planning for development was translated into programs for increased output and productivity.

The study of Greece indicated that agricultural output has doubled since World War II. Changes in output were not uniform in all regions or product groups; one region, Macedonia, accounted for nearly half the total growth in output. Increased output was the result of increased use of inputs, increased productivity and improvement in the composition of production. Increased fertilizer use contributed substantially to growth in crop production and greater availability of feed was important in the increase in livestock production per animal. Much of the motivation which led individual producers to expand output originated as response to activities of the Government of Greece. Price policies and subsidies were effective in bringing about desired changes in agricultural production. The Agricultural Bank of Greece, an instrument of the Government, was also important in the execution of

agricultural policy. It provided credit and fertilizer at low prices to producers throughout Greece and also supplied technical advice on its use.

B. Role of Agriculture in Foreign Economic Development Programs. Little attention was given specifically to this activity because of limited research resources. However, a research proposal designed to measure the relationships between agricultural development and overall economic growth and to determine an agricultural development plan for a selected country was prepared and submitted to AID at their request. This research proposal is being reviewed by AID.

C. Effects of Economic Development Upon Patterns of Foreign Trade. Results of recent studies on the effects of foreign economic growth and market potentials for U.S. commercial agricultural products show that growth in world markets for U.S. exports has been closely related to economic growth in other countries. For example, during the period from 1938 to 1959-61, U.S. commercial agricultural exports to developed and less-developed countries increased 13 and 16 percent, respectively, for each 10 percent increase in per capita income in these countries. A cross-section analysis based on 1964 data on income and trade for 67 countries, shows that U.S. commercial agricultural exports increased 12.7 percent for each 10 percent increase in per capita income in these countries. The 19 high-income countries with annual per capita incomes of \$600 or more imported \$9.26 of commercial U.S. agricultural products per capita while the 27 middle-income and 21 low-income countries imported only \$3.46 and \$0.30 per capita of U.S. commercial agricultural products. The middle and low-income countries had per capita income that averaged between \$200 and \$600 and less than \$200 in 1964, respectively. These data suggest that continuation of world economic growth over the next decade would more than double U.S. commercial agricultural exports from the average level of \$4 billion during the late 1950's. Should the relationships between foreign economic growth and trade that prevailed in 1964 continue in the future, U.S. commercial agricultural exports would increase from \$4.8 billion in 1966 to \$6.0 billion or more by 1970. The most rapid increase in imports of U.S. commercial agricultural products is most likely to develop in the transitional or middle-income countries should they achieve a rapid rate of economic growth over the next decade. The higher import potential in these countries is associated with a relatively high income elasticity of demand for food, coupled with a more rapid growth in food demand than domestic sources can supply, even with greatly improved technology.

D. Demand for Agricultural Exports of Less-Developed Countries. Research has recently been started on an analysis of the demand for about 22 selected agricultural products that account for about 90 percent of the agricultural exports of less-developed countries. The work in this area has been divided into two phases: (1) The analysis of world trade flows for each commodity selected for study, and (2) the demand for these commodities in 1980. Trade flow analysis will cover the period 1951 to 1965, a period long enough to allow for major changes to have occurred in economic development and import demand in the major consuming markets or countries of the world. The analysis

of factors affecting demand will also be a long-term nature but will concentrate heavily upon the most recent consumption patterns as a basis for making predictions of how world demand will change by 1980. Work under this area is carried out under a Participating Agency Service Agreement with AID.

E. Research Grants Under P.L. 480. Results from the terminated contract, "Economic Analyses of the Effects of Philippine Economic Development on the Demand for U.S. Agricultural Products," carried out under Line Project A-18-DTA-1(a) indicate that there has been only a slight rise in per capita income in the Philippines and that per capita imports of U.S. agricultural products have likewise increased only slightly from 1950 to 1962. However, major changes in the commodity composition of grain imports were identified. As a result of the establishment of a flour milling industry in 1959, wheat grain imports have almost entirely replaced wheat flour imports.

Grants supported 15 studies in foreign countries during the past year. Four of these studies were completed during the year as follows:

- (1) ISRAEL, Line Project A10-ERS-1(k), Social Factors which Promote or Impede Changes in Agricultural Organization and Production in Israel.

This project involved the examination of rural cooperation and rural municipal government in new small holding villages in Israel. The study illustrates the need for different approaches to settlement under varying social conditions involving varying social groups, if they are to promote agricultural development.

- (2) ISRAEL, Line Project A10-ERS-4(k), Comparative Analysis of Processes of Agricultural Development and Allocation in Israel.

This was a study in depth of three basic types of land settlement in Israel involving various cooperative and collective techniques, and analyzing their effectiveness in contributing to overall development. It laid the groundwork for a broader, cross-cultural analysis which is to follow.

- (3) PAKISTAN, Line Project A17-ERS-2, Income Elasticity of Demand for Food Under Progressing Stages of Agricultural Development in Pakistan.

The findings of this study supplement and strengthen conclusions based on similar studies in low-income countries elsewhere in the world. In Pakistan, cereals and starchy foods provide three-quarters of the caloric intake. Increases in income will be spent on proportionally larger consumption of animal products, fruits and vegetables. It was found that the income elasticities of demand for individual food products varied from 0.60 to 0.99 or even more than 1.0 in some cases.

(4) COLOMBIA, Line Project S5-ERS-2(a), Marketing Rice in Colombia.

This study provided information on rice marketing structure, margins, and potential areas where improvement in efficiency can be achieved. This will be useful for the United States in evaluating prospects for future trade in rice. The analysis indicates a potential need for substantial rice imports by 1975.

Eleven research projects underway as of October 1, 1966 are as follows:

India

- (1) Impact of Changing Conditions on Grain Marketing Institutions and Structure of Grain Market in the Punjab, India.
- (2) Evaluation of the Impact of Land Reforms on the Structure of Land Holdings and Farm Production Potentials in Western India.
- (3) The Structure and Behavior of Farm Prices in India.

Israel

- (4) Evaluation of Long-Term Programs for Agriculture with Respect to Requirements and Supply of Capital in Israel.
- (5) Quantitative Analysis of Optimal Water Resource Development and Allocation in Israel.
- (6) Methods of Compilation of Agricultural Statistics in Israel.
- (7) Comprehensive Programming of Regional Economic Development.

Finland

- (8) The Relation of Planning and Management to Success in Farming in Finland.
- (9) The Economics of Alternative Use of Land for Agriculture and Forestry in Finland.

Spain

- (10) Food Consumption in Relation to Family Income in the Rural Population in Spain.

Colombia

- (11) Economic Aspects of the Production, Marketing and Utilization of Corn and Other Feed Grains in Colombia.

AREA NO. 1--EFFECTS OF FOREIGN ECONOMIC DEVELOPMENT ON AGRICULTURE

PUBLICATIONS

- (1) Changes in Agriculture in 26 Developing Nations, 1948 to 1963, For. Agr. Econ. Rpt. No. 27, Nov. 1965.
- (2) Christensen, Raymond P. Man's Historic Struggle for Food. 1966 Yearbook of Agriculture.
- (3) _____ and Parker, Frank W. Fertilizers and the Economics of Crop Production. Paper presented at United Nations Inter-Regional Seminar on Production of Fertilizer, Kiev, Ukrainian SSR, Aug. 24-Sept. 13, 1965.
- (4) Mackie, Arthur B. Discussion: Trade Policies and U.S. Agriculture. Journal of Farm Economics, Vol. 48, No. 2, May 1966.
- (5) _____ and Kirby, Riley. Tables for Rates of Growth and Rates of Decline, ERS For. 160, June 1966.

Publications of State Agricultural Experiment Stations

- (1) Due, Jean. Survey of Sierra Leone. Department mimeo, May 1965, Illinois.
- (2) Fettig, L.P. Agricultural Development in Turkey: A Case Study of a Village Economy. Illinois Research, Summer, 1965, Illinois.

AREA NO. 2

EXPORT PROGRAMS AND MARKET DEVELOPMENT

Problem. Although commercial agricultural exports have gained relative to concessional sales and grants for the past three years, food aid shipments averaging over \$1.5 billion annually still accounted for approximately 23 percent of total U.S. agricultural exports in 1966. With the level of food aid authorizations expected to continue at a high level, agricultural commodity assistance will continue to represent a sizeable share of the net flow of total U.S. foreign economic assistance to the developing countries, which has averaged over 40 percent of the total since 1956. As we look to the future, basic problems are anticipated in achieving effective programming and distribution of food aid to help meet agricultural and national economic development objectives in recipient countries. Improved market infrastructure as well as new methods and arrangements are needed to overcome handling and distribution obstacles to insure that food aid is used in the most effective manner to meet nutritional and development needs. Also, more precision will be required in the programming of food aid so that it will contribute to economic development plans designed to meet more adequately increasing food requirements in the recipient countries.

Therefore, analysis and evaluation of the impact of these programs and their implications to agricultural production, consumption, trade, and development in the recipient countries as well as to U.S. agriculture is urgent. There is also need for appraising and studying foreign market structures and distribution systems in the developing countries for the purpose of facilitating the utilization of U.S. imported commodities. Since food aid programs will be continued at a relatively high level into the future, research on the economic implications of aid will be needed to assess (1) The effect of Food for Peace shipments on commercial trade of the United States and third-country exporters, (2) the relative cost and benefits of alternative government export programs, (3) the use of surplus agricultural productive capacity to facilitate domestic and foreign economic development, and (4) the effect of agricultural commodity aid on the efficient use of agricultural resources in recipient countries.

PROGRAM

A. The Impact of Food Aid in Recipient Countries and Its Role in Economic Development. Contract research studies on the commodity and economic impact of P.L. 480 programs have been made in a number of countries--Israel, India, Turkey, Colombia, Greece, and Spain. The research contract studies were done in cooperation with the Foreign Agricultural Service in which Title I local currency market development funds were used. The individual country studies have been concerned with the evaluation and analysis of the effects

of P.L. 480 programs on: (1) Agricultural prices, production, and consumption; (2) national agricultural price and stabilization policies and programs; (3) commercial trade of the U.S. and third-country exporters, including trade patterns and balance of payments problems; and (4) the use of local currency loans and grants to finance agricultural and industrial development. In addition to the country studies, limited appraisals of the net contribution of P.L. 480 programs to international aid and development have been continued. Since agricultural commodity assistance has accounted for between 40 percent and 47 percent of the net annual flow of U.S. development assistance to the underdeveloped countries over the last six years, research in this area is needed to provide guidelines for increasing the effectiveness of food assistance in foreign economic development.

B. Interrelationships of Domestic and Food Aid Programs. Research in this area is concerned with (1) International pricing and production policies, including the analysis of selected U.S. commodity export prices, domestic price supports, and their relationship to consumer prices and price support levels in selected P.L. 480 recipient countries; and (2) the effects of national pricing and trade policies on concessional and commercial trade. Research in this area includes analysis of the economic relationships of U.S. domestic and export pricing policies to the domestic and import pricing policies of P.L. 480 and other importing countries. It is concerned with determining the significance of the differences or disparities between world export prices and domestic prices in the importing countries and their impact upon efficient use of agricultural resources.

C. Improvements in Marketing and Distribution Needed for More Effective Utilization of U.S. Imported Commodities. In order to achieve greater efficiency in food aid utilization and programming, there is urgent need to develop research guidelines and initiate research for the study and analysis of foreign marketing and distribution systems. Currently, no organized research is being conducted in this area. As a beginning, research in this area should be concerned with the analysis of: (1) The adequacy and efficiency of storage, refrigeration, transportation, port, and processing facilities; (2) capital requirements for progressive development of marketing structures; (3) measurement of wastes and losses and means of reducing them; (4) market efficiencies, including analysis of marketing and distribution costs and margins; (5) political and administrative problems in improving food distribution systems; and (6) the rate at which marketing improvements may be instituted within the framework of existing systems and the stage and rate of economic growth.

D. Economic Appraisal of Food Nutrient Sources and Comparative Costs. With increased interest in the improvement of nutrition in Food-for-Peace programs, there is need to analyze the comparative cost of food nutrient sources. Research in this area includes studies of the relative efficiency of different food products as sources of carbohydrates, fats, and proteins and the relative costs of alternative processed food products (particularly high protein

products) as sources of food nutrients. Total Federal scientific effort devoted to research in this area was 2 man-years.

E. Program of the State Agricultural Experiment Stations. Several states report work in this area. Reported information shows that 1.4 scientific man-years was devoted to research in this area.

REPORT OF PROGRESS

A. The Impact of Food Aid in Recipient Countries and Its Role in Economic Development. Three comprehensive country studies of the economic effects of the P.L. 480 program were published during the year--Turkey, Greece, and India. The major part of the Spanish study has been completed and discussions are proceeding on arrangements for publication. Major findings of the contract studies, together with individual country analyses made by the staff, have been summarized in a report which has been submitted for publication.

Part Three of the published report for Turkey included chapters dealing with (1) Uses of P.L. 480 local currency in Turkey, (2) the impact of P.L. 480 local currency on the public sector, and (3) use of the Cooley loans and their economic effects. Part Four of this study dealt with the international and development implications with special chapters on (1) The structure of foreign trade, (2) the geographical pattern of foreign trade, and (3) the effect of P.L. 480 operations in the balance of payments in Turkey.

Part Three of the published report for Greece covered the impacts of the use of sales proceeds with major chapters on (1) The utilization of local currency sales proceeds, (2) effects on government expenditures and monetary stability, and (3) the contribution of sales proceeds to industrial development. Part Four of the Greek study was concerned with international aspects and contained chapters on (1) Effects on foreign trade, and (2) effects on the balance of payments.

The Indian study included a comprehensive analysis of (1) Investment of P.L. 480 funds, (2) impact of counterpart funds on money supply, and (3) effects (of P.L. 480) on trade and balance of payments.

B. Interrelationships of Domestic and U.S. Export Programs. Substantive material and important conclusions derived from the various foreign contract studies as well as individual country analyses by the Economic Research Service staff were reported in several major papers presented during the year. These papers covered such topics as (1) Trends in world grain trade; (2) changes in world grain price movements; (3) geographic shifts in grain imports; (4) relation between world grain production, consumption, and trade; (5) world grain prices and disparities between exporting and importing countries; (6) effects of P.L. 480 on grain production in recipient countries; and (7) effects of P.L. 480 on the commercial trade of the United States and third-country exporters.

C. Changes in Marketing Structures Needed for More Effective Utilization of U.S. Imported Commodities. Extensive discussions were held during the year to identify major research needs and priorities in marketing and distribution. The Gokhale Institute of Politics and Economics has expressed interest in initiating marketing research to assess the extent of wastes and market losses and the adequacy of existing systems and facilities for the handling and distribution of both domestically produced and imported grains in India. Market research of this nature is of major importance to the development and expansion of markets for U.S. agricultural commodities.

D. Economic Appraisal of Food Nutrient Sources and Comparative Costs. Research in this area has been limited to staff appraisals and analyses of particular problems as they occur.

AREA NO. 2--EXPORT PROGRAMS AND MARKET DEVELOPMENT

PUBLICATIONS

- (1) Aktan, Resat, et. al. Analysis and Assessment of the Economic Effects, Public Law 480 Title I Program, Turkey, Ankara: 1965, 525 pp.
- (2) Coutsoumaris, G., et. al. Analysis and Assessment of the Economic Effects of the U.S. P.L. 480 Program in Greece, Athens: 1965, 293 pp.
- (3) Gokhale Institute of Politics and Economics, Impact of Assistance Under P.L. 480 on Indian Economy, Poona: 1966.
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- (5) Barlow, Jr., Frank D. International Grain Trade Trends and Effects of P.L. 480. Paper presented at the Farmers Grain Dealers Association of North Dakota Annual Convention, Bismarck, Jan. 1966.
- (6) _____. International Grain Trade Trends and Food Aid Programs. Paper presented at the Kansas Grain and Feed Dealers Association Convention, Wichita, April 1966.
- (7) _____. The Growing Importance of Agricultural Exports to U.S. Agriculture. Paper presented at Midsouth Soybean and Grain Shippers Association Annual Convention, Memphis, Tenn., Aug. 1966.

Publications of State Agricultural Experiment Stations

- (1) Baanante, Carlos. An Analysis of Certain Aspects of the Export Demand for Flue-Cured Tobacco. North Carolina, 1965.
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AREA NO. 3

INTERNATIONAL MONETARY AND TRADE RESEARCH

Problem. U.S. agricultural exports have an important role in the present and prospective balance of payments problem. This role involves both exports for dollars and concessional sales. Continuation of P.L. 480 programs and development activities by many U.S. and international agencies makes it necessary to analyze the monetary and financial aspects of these programs from the viewpoints of both the effects on the recipient countries and United States agricultural exports. Constant reviews and analyses are needed of these aspects based upon available economic data obtained from sources such as reports of U.S. foreign services and the international financial institutions. These analyses are essential to support the Department's position in interagency discussions leading to the adoption of policies and programs carried out by the United States Government.

The trend toward regionalization continues to develop among countries with similar trade policy interests. The European Economic Community (EEC) reached decisions in the summer of 1966 which provide for further implementation of the Common Agricultural Policies. Attention is again being given to the possibilities of the European Free Trade Association member countries joining the EEC. Recently, appeals have been made for a Common Market of Latin America which would embrace both the Latin American Free Trade Area and the Central American Common Market.

The process of regionalization may alter the supply of indigenous agricultural production, as well as the demand for agricultural products. Regionalization often involves changes in GATT obligations and therefore has important implications for access of U.S. farm products in the foreign markets.

One of the major considerations in assessing the future expansion of U.S. agricultural exports is the potential increase in requirements for agricultural products in developed countries, as well as governmental policies utilized by these countries to influence this trade potential. Information is especially needed regarding (1) The characteristics of world trade demand and supply of agricultural products such as feed grains and oilseeds, (2) the trading and pricing policies followed in international markets, and (3) the techniques employed in protecting prices and incomes of domestic producers from the effects of world market prices.

Information on how government policies affect trade is important for appraisal of world import demands and supplies of agricultural products, as well as analyses of international commodity agreements.

PROGRAM

A. Analyses of External Financial Position of Public Law 480 Recipient Countries. Economic analyses are required for each country requesting P.L. 480 assistance. These analyses include: (1) Examining the financial position of the country with respect to directions of trade, overall balance of payments position, external debt position, projected debt service requirements, and foreign exchange position; (2) ascertaining the internal economic conditions including; analyses of price stability, trends in economic growth, per capita income, investment conditions, and monetary and fiscal developments and policies; (3) making recommendations as to the most appropriate type of P.L. 480 program, given the financial position of the country, the U.S. balance of payments position, and the legal criteria under which U.S. agricultural export programs are operative.

B. Public Law 480 Transactions Entering the U.S. Balance of Payments. The importance of this project arises from the changing conceptual treatment and interpretations associated with social accounting techniques and the present U.S. efforts to correct the balance of payments problem. In 1965, P.L. 480 transactions totaling \$1.6 billion entered the U.S. payments accounts. The methodology employed in tracing the entry of P.L. 480 transactions in the payment accounts follows the basic social accounting techniques developed for the statistical presentation of a balance of international payments statement. Basic data on P.L. 480 to be utilized is obtained from several U.S. Government agencies, but primarily from the U.S. Department of Agriculture records. A concurrent objective is to investigate the significance of P.L. 480 to the nation's total foreign assistance program.

C. Agricultural Development Banks and Credit Programs. Agricultural credit institutions including agricultural development banks and supervised credit programs in developing countries have a particular relevancy to U.S. economic assistance efforts to enhance economic growth abroad. This is especially relevant to the agricultural sector of these countries. Many of these credit institutions and programs have been established primarily to channel credit resources to the agricultural sector. But, there is growing awareness that expanded credit availabilities coupled with supervision and extension services are urgently needed. For the most part, external funds to finance these agricultural credit activities are obtained from international lending institutions and bilateral U.S. assistance. In order to properly appraise these efforts, more needs to be known about the agricultural credit institutions and their policies and how the financial assistance obtained externally by the developing countries is utilized in agricultural credit programs.

D. Regionalization and U.S. Trade. The formation and strengthening of associations of nations around the world could substantially affect world trade in agricultural products and significantly influence U.S. agricultural exports. Studies in this area are concerned with obtaining estimates for these regions of the relationships between output, utilization, and trade of agricultural commodities and analyses of the changing agricultural prices, marketing

policies, structures and programs brought about by the process of regionalization. Particularly relevant to the potential impacts of the EEC and EFTA are developments in the feed-livestock economies of the member countries of these organizations.

E. Trade Policies and Demand Relationships. In both developed and developing countries, government trade policies substantially influence supplies, demands and prices for products in world markets. Information on the effects of such policies is of vital importance to appraisals of potential commodity demands and supplies. This information is also of importance in analyzing potential effects of international commodity agreements.

An area of particular importance to the United States are the world demands for products of the feed-livestock area. For example, U.S. exports of feed grains have increased over 100 percent in the past 5 years. Developments associated with products of the feed-livestock sectors are also of interest to developing countries. Demands for higher quality diets have been associated with rising incomes. These often take the form of increased consumption of animal products. Ability to purchase needed products in world markets or produce these products indigenously are central to many of the problems of developing countries.

F. Special Economic Analyses. Studies on financial and monetary aspects of agricultural programs on an international level are conducted and featured in the determination of the Department's positions and policies. These studies analyze financial and monetary factors which affect U.S. and world agricultural trade, and evaluate U.S. economic and agricultural assistance programs in developing nations. Special attention is given to foreign financial activities such as changes in monetary policies of individual nations, agricultural export promotion programs, and the financial aspects of the main common markets of the world: EEC, LAFTA, and CACM.

Total federal scientific effort devoted to research in the monetary and the trade research areas was 7.0 man-years, divided as follows: 3.5 to International Balance of Payments, Financial Conditions and Credit Programs; 3.0 to Regionalization and U.S. Trade; 0.5 to Trade Policies and Demand Relationships.

G. Program of the State Agricultural Experiment Stations. Several experiment stations including Minnesota, Michigan and Illinois indicate that they are conducting research on the effects of the European Economic Community on U.S. agricultural trade. Reports received show that 6.1 scientific man-years is devoted to research in this area, but this may not be a complete report.

REPORT OF PROGRESS

A. Analyses of External Financial Positions of P.L. 480 Recipient Countries. On a continuing basis, detailed recommendations are made concerning agricultural sales for foreign currency and dollars under P.L. 480 to developing

countries. Special analyses are made to determine the implications of the alternative programs. These analyses are based on current statistical data and information regarding balance of payments, trade, import arrangements, the status of U.S. held local currency balances and the utilization of such currencies in developing countries. If the sale is made on the basis of a dollar credit, an analysis of the most appropriate credit terms and repayment schedule commensurate with the country's debt position provides the basis for specific recommendations. In the conduct of these specific investigations, general policy recommendations with respect to the conduct of programs are developed for use in interagency meetings.

B. P.L. 480 Transactions Entering the U.S. Balance of Payments; Relationship to Total U.S. Foreign Assistance. Farm product export earnings on merchandise and services obtained through transactions authorized under P.L. 480 totaled \$1.6 million in 1965. Foreign currencies obtained through Title I sales used to purchase goods and services abroad by the U.S. Government curbs U.S. dollar outflows. In 1965, foreign currency amounting to the equivalent of \$183 million was spent by the U.S. Government in lieu of dollars abroad. For the period 1955-65, expenditures in foreign currencies amounted to \$1.4 billion representing 14 percent of cumulative Title I sales receipts of \$9.7 billion. For the period 1954 through 1965, net U.S. foreign assistance under P.L. 480 represented 22 percent of total (net) U.S. foreign assistance of \$51.6 billion, excluding investments in international institutions. Initial research of an earlier investigation and preliminary results of the present inquiry reveal that the entire amount of P.L. 480 transactions as recorded, leads to no dollar outflow and may on balance, result in a small surplus.

C. Agricultural Development Banks and Credit Programs. Analysis of activities of agricultural development banks and credit programs have received increasing attention in connection with the Branch's role in interdepartmental discussion of U.S. international financial commitments to credit institutions in developing countries. The funds allocated to these credit activities have significant effects on the developing country's internal economy and external financial position. A recent survey of agricultural credit activities in Mexico and the Central American countries was completed. Mexico's agricultural credit programs channel foreign development credits through the Nacional Financiera, S.A. In the latter half of 1965, Mexico obtained new foreign loans to finance its already established agricultural credit program. These loans are to be administered by the Bank of Mexico's trust fund agency; the Fondo de Garantia y Fomento para la Agricultura, Ganaderia y Avicultura. One loan was obtained for AID, totaling U.S. \$21.5 million, and the other from the World Bank (IBRD), totaling U.S. \$25 million. In March 1965, Mexico set up a new institution for channeling credit to agriculture; the Banco Nacional Agropecuario, S.A. (BNA) with a capital of 1.5 billion pesos (U.S. \$120 million).

Research on agricultural credit in Central American is increasing due to widespread awareness of the need of such research in undertaking effective credit programs for agriculture. The Inter-American Committee for

Agricultural Development (CIDA) is engaged in cooperative research with Latin American countries in studying the overall agricultural credit situation in each country. Aside from the recognized problem that agricultural operations are small and intermediate in size, the international lending institutions find it difficult to extend financial assistance because of the absence of well-defined projects. Also contributing to the problem is the shortage of domestic funds to match international financing. The CIDA study plan for each country hopes to overcome these difficulties by analyzing and evaluating the current status and characteristics of farm credit in Latin America.

D. Regionalization and U.S. Trade. Meat production and consumption in the European Economic Community were analyzed in a report, which included projections of EEC meat import needs through 1966. A special task force composed of personnel from several ERS Divisions prepared a graphical analysis of recent trends in the EEC grain-livestock economy which was published in July 1966 and contains key time series on EEC production, consumption and trade of agricultural products. Work has been continued on developing a framework for analysis of the derived demand for feed grains in the EEC. This research involves the estimation of structural relations influencing demand. A report is nearing completion. Work is underway to analyze the developments of intra-regional trade of the EEC. Data for EEC trade in commodities closely related to the EEC feed-livestock economy for 1952-1965 have been automated and, in turn, organized into trade matrices. Time series have been developed and market share computations have been made. For selected time series, trend lines have been calculated. An analysis is presently being prepared for publication along with important segments of the data.

A report on the development, decision-making structure, and operations of the European Agricultural Guidance and Guarantee Fund (EAGGF) was published in June 1966. As the financial arm of the European Economic Community's Common Agricultural Policy, the EAGGF reimburses Member States for subsidies on exports to countries outside the EEC, supports internal market intervention, and offers grants for structural improvement projects in agricultural production and marketing. To an ever-increasing extent, the EAGGF is assuming financial responsibility for these measures, which were previously the sole responsibility of the individual Member States of the EEC. This has brought a rapid increase in the EAGGF's budget, from a total of \$37.9 million in its first year of operation (1962/63) to an estimated \$222.7 million in its third year (1964/65). Recent estimates project EAGGF expenditures approaching \$2,500 million by 1970. One of the most difficult problems which has plagued the EAGGF is the large disparity which exists between some Member States' assessed contributions to the EAGGF and receipts from the EAGGF. The disparity is especially large for Germany and Italy. While special measures have been adopted to ease the burden of the disparity, indications are that it will continue as a major problem in the future.

A research project now underway will estimate changes in EEC consumer food costs associated with the establishment of harmonized prices in the feed-livestock economy of the EEC. The probable effect of food cost changes on

the general cost of living in the EEC will also be considered. Although decisions on harmonized prices have now been made in the EEC, there are some indications that these will have to undergo changes in the next 5 to 10 years. In this context, estimates of food cost changes will be useful in appraising potential effects on the quantity of agricultural commodities demanded in the EEC, which in turn is of particular importance to U.S. agricultural exports. Also, changes in the cost of living are of special importance in the context of total trade in the Atlantic Community. For example, food prices could have a significant influence on wage levels and production costs and therefore on economic growth and terms of trade for industrial products, all of which are important in considering growth of demand for agricultural products.

Work was initiated on developments in Latin American integration. Attention has been given to the historic developments of the Latin American Free Trade Association and the Central American Common Market and to the possibilities of economic integration of the fertilizer sector in Latin America. The fertilizer sector was selected because of many proponents of Latin American integration have suggested that integration would proceed by individual product sectors. Fertilizers and farm machinery are mentioned most frequently in this context.

P.L. 480 market development funds were used to evaluate and project through 1970, the import demand for oilseeds and oilseed products in the European Economic Community. A demand analysis coupled with a supply analysis for each of the oilseed and substitute products facilitated evaluation of the import needs within the Community. The present and potential trade gap has been studied in view of the changes occurring in prices, population, and government policies. A USDA circular summarizing major findings of the study will be released late in 1966. A more detailed report will be published later.

Work proceeded under two contracts for the study of the feed-livestock industry of the EEC: (1) Analysis of the livestock and grain economy of France using data obtained from individual French farms (a revised final report is expected shortly), and (2) investigation of three principal aspects of Southern and Northern EEC, using individual farm data; changes in prices and marketing of grain; and regional adjustments in the EEC livestock-feed economy and their effects on foreign trade patterns. This project is scheduled for completion in 1967.

E. Trade Policies and Demand Relationships. During the past year, work has progressed on this subject in three areas: (1) Analysis of potential trade impact on alternative international grain agreement proposals for use in the Kennedy Round negotiations, (2) exploratory work in preparation for more intensive studying of government policies affecting trade, and (3) exploratory work and data compilation in preparation for more intensive studying of world demands for feed grains.

It is anticipated that the resources devoted to each of these areas will be increased during the coming year. The negotiations in the Kennedy Round are becoming increasingly intensive thus requiring further analyses as new proposals for arrangements on grains develop.

The scope of the work on government policies affecting trade will initially be those applicable to the temperate zone products in developed countries. The study will then be expanded to include those policies affecting tropical products and selected developing countries. The work already underway for the EEC will be directly applicable to the study of world demands for feed grains. Import demand of other regions of the world will also be analyzed.

F. Special Economic Analyses. Special studies on financial and monetary aspects of international and foreign agricultural programs were developed to assist in determining U.S. agricultural policy. The Branch's duties have continued to increase with respect to U.S. economic assistance programs. This has required increased participation in policy recommendations on agricultural matters of the National Advisory Council and in the Development Loan Staff Committee. The continuing balance-of-payments problems of the U.S. and other developed nations led to comparative analyses and highly technical evaluations of U.S. agricultural programs as they applied to world agricultural activities. Additional studies were required because of the financial crises in the United Kingdom and in developing nations. Increased attention has been given to the financial aspects of common markets in the world, such as the EEC and LAFTA, with special attention to U.S. agricultural interest in the Central American Common Market.

AREA NO. 3--INTERNATIONAL MONETARY AND TRADE RESEARCH

PUBLICATIONS

- (1) Berntson, B.L. The European Guidance and Guarantee Fund. ERS For. 144, June 1966, 30 pp.
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- (3) Kruer, G.R. Foreign Gold and Exchange Reserves, Trade and Economic Growth in 1965. May 1966, 15 pp.
- (4) Kruer, G.R. U.S. Agricultural Exports Continue to Help Balance of Payments. Foreign Agricultural Trade of the United States, Sept. 1966.
- (5) O'Donnell, P.E., Abel, M.E., Blaich, O.P., and Brown, R.N. The Grain-Livestock Economy of the European Economic Community: A Historical Review, 1951-63. For. Agr. Econ. Rpt. No. 31, July 1966, 58 pp.
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- (7) Rice, G.P. Foreign Gold and Exchange Reserves, Current Trends in International Liquidity. Economic Research Service, Dec. 1965, 16 pp.
- (8) Schertz, L.P. and Rice, G.P. U.S. Loans Under Public Law 480: Comments. Journal of Farm Economics, Vol. 48, No. 3, Part I, Aug. 1966.

Publications of State Agricultural Experiment Stations

- (1) Dahl, R.P. Demand for U.S. Soybeans in the European Common Market: A Case for Optimism. Journal of Farm Economics, Vol. 47, No. 4, Nov. 1965, pp. 979-92, Minnesota.
- (2) Metcalf, Alonzo V. European Economic Community and Missouri Agriculture. The Business and Government Review, Univ. of Missouri, Feb. 1965, Missouri.

AREA NO. 4

TRADE STATISTICS AND ANALYSIS

Problem. U.S. agricultural exports totaled a record \$6.7 billion in fiscal year 1966, compared with \$6.1 billion in the previous year. The 1965-66 total was 22 percent above the 1961-65 average and 75 percent above the 1955-59 average. The substantial increase in exports has been mainly due to larger commercial exports as shown by their accounting for 76 percent of the total in 1965-66, compared with 71 percent in 1959-60. Agricultural exports during fiscal 1966 were \$2.2 billion larger than agricultural imports. This export balance is a new record high and was attained in a year when imports showed their largest increase since 1951. The balance of trade has been highly favorable for the past several years reflecting the pronounced upward trend in agricultural exports. During the last year, the foreign market was an outlet for the production of one out of every 4 acres harvested in the United States. It is of concern to the United States that U.S. agricultural exports be maintained on an upward trend. Continuing studies are needed to determine whether or not the United States is sharing in the benefits from growing world markets and to determine the policies and actions needed to assure a continuous growth in U.S. farm product exports.

Earlier in the year, the absence of France from meetings of the European Economic Community (EEC) created uncertainties about the character and speed of EEC agricultural economic integration. However, in July 1966, the Council of Ministers was able to resolve a host of issues for completing a common agricultural policy for over 90 percent of the Community's farm production. These decisions provided the basis for free Community-wide movement of many farm products by July 1, 1968. These developments, the British currency crisis which resulted in an emphasis on greater agricultural self-sufficiency, the continuing erosion of the most-favored-nation principle in international trade, and other developments will have a significant impact on U.S. agricultural exports. Also in view of growing interest in broader use of international commodity agreements, studies need to be made to determine likely benefits and costs which may be experienced by the United States within the framework of such agreements. These developments must be continually followed, analyzed, and information about them made available to those concerned with the maintenance and expansion of U.S. agricultural exports.

A continuing analysis of U.S. agricultural trade, including Food for Peace shipments, is needed to detect trade trends and problems and to determine the relevant economic and other factors that affect this trade. This information is used to provide agricultural producers, trade groups, and Government officials with a flow of statistics and interpretative reports on the status of and the outlook for U.S. agricultural exports and imports. These statistics and interpretative reports are used in the formulation of policies,

positions, and programs in the area of foreign marketing of U.S. farm products and of competition, both at home and abroad, from foreign farm products. Some of these areas are the expansion of commercial foreign markets for the nation's agricultural abundance, adjustment of domestic price support programs and production controls to domestic and foreign demand, import fees and quotas to restrict imports detrimental to U.S. agriculture, trade agreement concessions to open new markets for agricultural products, the U.S. Food for Peace Program to share the nation's bounty with friendly people abroad, and export payments where needed, to help make U.S. farm products competitive in world markets. More timely, precise and complete statistical data can improve the scope and depth of interpretations used in arriving at decisions on these and other major trade problems facing U.S. agriculture.

PROGRAM

A. U.S. Agricultural Trade Statistics. This program involves the assembly, tabulation, and summarization of U.S. agricultural export and import statistics, as well as interpretations of agricultural trade by commodity, by country, commodity-by-country, and country-by-commodity. The basic data for the program are purchased from the Bureau of the Census in the form of electronic computer runs which that agency obtains from shippers' export and import declarations.

B. U.S. Agricultural Trade Situation. Estimates of U.S. agricultural exports and imports for current and future periods are developed. These are based upon U.S. agricultural trade statistics and upon their projection through regular consultation and cooperation with various subject-matter specialists in commodity, regional, and program operations, and daily research into news and other informational media. They serve as the backbone of a continuing analysis of U.S. agricultural trade. Export estimates are undertaken monthly and annually; import estimates, annually; and Food for Peace estimates, quarterly and annually.

The monthly estimates are in the form of a determination of the quantity and value of U.S. exports by principal commodities and major commodity groups. Connected with these estimates is an analysis of the factors and developments accounting for changes in agricultural exports compared with previous periods. In addition, an evaluation of the quantity and value of U.S. agricultural imports, competitive (supplementary) and noncompetitive (complementary) with domestic production is undertaken.

Annual appraisals of U.S. agricultural trade (calendar and fiscal year) include Food for Peace shipments and total U.S. agricultural exports. Studies are made of the magnitude and trend of commercial exports for dollars. The continuing program includes the determination and appraisal of the value of foreign trade; quantity indexes of foreign agricultural trade; value of trade for selected commodities and groups; value of trade by countries of

destination; and quantity and value of trade with specified countries and in principal agricultural products.

Considerable effort is devoted to the development of statistics showing the shares of the individual States in U.S. agricultural exports.

C. World Agricultural Trade Statistics. In response to the need for information on the agricultural trade of other countries, a new statistical program has been established and is being expanded. This program, like that for U.S. foreign agricultural trade, provides quarterly and annual data on the agricultural exports and imports of the world's major trading countries. The basic data are purchased from the Organization for Economic Cooperation and Development (OECD) in Paris and from the United Nations Statistical Center in New York in the form of magnetic tapes. Summaries of exports and imports, commodity-by-country and country-by-commodity are being prepared for publication and serve in interpretations of the current situation and of the outlook for U.S. agricultural trade and its competitive position in major world markets.

Separate studies have and will be made of the agricultural trade of certain trade blocs such as the European Economic Community, the European Free Trade Association, the Latin American Free Trade Association, and the Central American Common Market to show the relative position of U.S. trade as economic integration proceeds.

D. Exports Under Food for Peace (Government-financed) Programs. A quarterly review of U.S. agricultural Food for Peace shipments by commodity is made. It includes an evaluation of the principal developments affecting such exports, as well as commercial sales for dollars. An annual evaluation is made on a fiscal year basis of the extent of assistance to U.S. agricultural exports by means of export payments in cash or in kind or by the sale for export of agricultural commodities from Government-owned stocks at less-than-domestic market prices. This analysis distinguishes between (1) Commercial sales for dollars and exports under Government-financed programs which receive export payment assistance, and (2) dollar sales and program shipments which do not receive this form of assistance. The total value of such payments is also determined. An annual appraisal is made of U.S. agricultural trade by country for fiscal and calendar years. This report distinguishes Food for Peace exports by 6 specified programs, commercial sales for dollars and total U.S. agricultural exports. Special studies are made of the magnitude and trend of program and commercial exports to provide information for developing new policies, programs, the establishment of attache posts, and export promotion activities for dollar sales.

E. Analysis of World Agricultural Prices. This program involves the compilation and analysis of international prices of important agricultural commodities to determine the relationship of these prices to the level of U.S. agricultural exports and imports and the "terms of trade" of principal U.S. agricultural products. Using all available sources, such as the Food

and Agriculture Organization, the European Economic Community, the Organization for Economic Cooperation and Development, as well as official and trade data from individual countries, prices of major commodities, accounting for most U.S. agricultural trade, are tabulated. These price series are used to prepare analytical reviews of price trends in principal world markets.

Particular emphasis has been placed on prices and variable import levies in the European Economic Community because of its importance as a destination of U.S. agricultural exports and because of the present transition period from distinct national price levels to a harmonized Community-wide price level and the problems attendant such transition.

Price index numbers summarizing U.S. agricultural exports and imports are prepared and published quarterly.

F. Estimation of Costs and Benefits of Agricultural Protectionism. A two-year grant with a two-year extension for economic research to be conducted by the University of Minnesota was made in June 1964. This research is designed to (1) Evaluate alternative techniques for measuring the influence of national agricultural and trade policies on the direction and volume of trade in temperate zone agricultural commodities, (2) assess the costs and benefits from agricultural protectionism on a selected commodity and country basis in the North Atlantic Community, and (3) develop and evaluate several alternative forms of international commodity arrangements aimed at reducing conflicts between domestic agricultural support and foreign trade in products of the grain-livestock economy. Approximately 1.5 professional man-years is being devoted to this project.

Total federally financed scientific effort devoted to research in this area during the fiscal year 1966 was 10.5 professional man-years, divided as follows: 1.0 to program leadership; 3.7 to U.S. trade statistics and analysis; 3.3 to world trade statistics and analysis; 1.5 to Food for Peace Program; and 1.0 to world agricultural prices.

REPORT OF PROGRESS

A. U.S. Agricultural Trade Statistics

Agricultural Exports at Record Level of \$6.7 Billion in Fiscal Year 1966. At \$6,681 million, U.S. agricultural exports during the fiscal year 1966 were up substantially from the past record of \$6,097 million during the preceding year. The fiscal year 1966 performance was dominated by substantial rises in U.S. exports of feed grains, wheat, soybeans, rice, protein meal, hides and skins, as well as smaller increases for poultry products, vegetables, fruits and meat and meat products. Export declines occurred in cotton, cottonseed and soybean oils, dairy products, and animal fats, oils, and greases.

U.S. Agricultural Imports Increased 12 Percent in Fiscal 1965-66. U.S. agricultural imports for consumption were \$4,454 million in 1965-66--up 12 percent from 1964-65. This increase in imports is the largest since 1950-51, when imports grew substantially from the impetus of the Korean conflict. Larger imports of supplementary (partially competitive) products accounted for 74 percent of the total increase. Imports of practically all the major animal products were up, including live animals. Beef and veal, dairy products, hides and skins, and wool imports all showed a significant rise. The only crop product of supplementary items to show a significant increase was imports of vegetables and preparations. Complementary (noncompetitive) product imports were up 7 percent with coffee imports accounting for 78 percent of the total increase. Bananas and cocoa beans also increased in 1965-66.

B. U.S. Agricultural Trade Situation

Export Market Benefits Many U.S. Farmers. About 78 million acres were required to produce the various agricultural commodities exported in fiscal year 1966. This is equivalent to 1 out of every 4 harvested acres in the United States. On a value basis, agricultural exports continued to be equivalent to 16 percent of total cash receipts from U.S. farm marketings, as in fiscal year 1965. Exports in 1966 accounted for over half of the U.S. production of wheat, dried edible peas, and hides and skins. Exports of rice, soybeans, and hops were over 40 percent of U.S. production. Over one-third of the production of dried prunes, tallow, nonfat dry milk, and grain sorghums was exported.

U.S. Agricultural Exports to the European Economic Community Continue to Increase. In fiscal 1966, 24 percent of U.S. agricultural exports went to the European Common Market. From 1962 to 1966, exports of farm products to the EEC increased 35 percent, while total agricultural exports increased 30 percent. In fiscal 1966, exports of farm products to the EEC totaled \$1,593 million. The Netherlands was the principal market in the EEC, followed by West Germany, Italy, Belgium-Luxembourg, and France. Part of the exports to the Netherlands was re-exported, primarily to West Germany. For the 5-year period 1961-62 through 1965-66, exports of commodities subject to the EEC's variable import levies, which became effective in July 1962, reached a low in 1962-63. Feed grains accounted for the largest share of the variable levy commodities, and the year-to-year increase in feed grain exports to the EEC has accounted for the rise in exports of commodities subject to the variable levies. Other commodities, notably wheat flour and poultry and eggs have decreased. U.S. exports of farm products not subject to variable import levies were up 25 percent in 1965-66 from 1961-62. Sharp increases in exports of soybeans and protein meal have more than offset declines that occurred in cotton and vegetable oils.

Agricultural Exports Help U.S. Balance of Payments. The balance of payments problem continued in 1965 but would have been much worse were it not for the significant contribution made by U.S. agricultural exports. During 1960-65

(calendar years), the value of total U.S. agricultural exports rose from \$4.8 billion to \$6.2 billion, an increase of 29 percent. Most of this gain came from commercial sales. About 75 percent of total U.S. agricultural exports are sold for dollars. Besides U.S. exports of agricultural commodities for dollars, there are also imputed dollar earnings (and dollar repayments on prior Title IV P.L. 480 credits) arising from U.S. agricultural exports under Government programs. The contribution of these exports to the strengthening of the U.S. balance-of-payments position may be measured in terms of exports of U.S. farm products for dollars, as well as certain imputed dollar earnings. Commercial sales of agricultural products in 1965, including the imputed dollar earnings and repayments totaling \$363 million arising from agricultural exports under Government programs, totaled \$5,062 million, up 45 percent from 1960. Further expansion of exports, including U.S. agricultural shipments, is high on the list of expansion measures advocated to correct the balance-of-payments problem.

U.S. Agricultural Export Shares by Regions and States, Fiscal Year 1966. The data and analysis published in 1964 showing estimates of shares of agricultural exports by states is being revised and updated. The shares of each Region and State in the national production of major farm commodities or commodity groups were estimated for 1965-66. These were undertaken for agricultural exports of the same commodities or commodity groups as in 1964. Export shares by commodities, Regions, and States were further broken down into Government Programs and Commercial Sales for Dollars. Illinois with \$666 million had the highest agricultural export share, Texas with \$495 million followed closely, and California with \$494 million ranked third.

C. World Agricultural Trade Statistics. Preparatory work continued with a view to publication of commodity-by-country and country-by-commodity tabulations of the exports and imports of the world's leading trading countries. This project will present total agricultural trade broken down into approximately 155 commodities and will concentrate on about seventy countries which account for approximately 90 percent of world trade. Special attention will be given to data summarized by trade blocs, such as the EEC and the Latin American Free Trade Association.

Analysis of Major Importing Countries. An analysis of agricultural imports for 1960-65 by the 7 largest importing countries of the world, excluding the United States was made during 1966. The 7 are the United Kingdom, West Germany, Japan, France, Italy, the Netherlands, and Belgium-Luxembourg. The United States supplied practically 15 percent of the combined import market of the 7 major importers. In 1965, these 7 countries imported agricultural products valued at \$20,505 million, or nearly two-thirds of world agricultural imports. Besides the United States, other developed countries were large suppliers to the major importers, while the less-developed nations received a smaller share of the total market of the 7. With increasing personal incomes in the major importing countries, consumption of livestock products and fruit and vegetable products has increased significantly in recent years. This growing consumption resulted in substantially larger

imports of feed grains and citrus products during the 1960-65 period. Such imports came mainly from the United States and the developed countries of Western Europe.

Agricultural Trade of the European Economic Community. The agricultural trade of the European Economic Community (EEC) in 1965 was 61 percent above the total agricultural trade in 1959. Data made available from the United Nations show the EEC countries are net importers. Net agricultural imports (imports over exports) were up one-third from \$4.8 billion in 1964 to \$6.4 billion in 1965. The pronounced increase in agricultural imports has accompanied the rapid economic growth of the Common Market Countries. Agricultural production in the EEC countries was up 16 percent from 1959 to 1964, while industrial production was up 49 percent. Agricultural trade among the EEC countries doubled from 1959 through 1965. The marked growth in internal trade of the Common Market reflects the effect of the gradual equalization of internal trading conditions. Along with the growth in internal agricultural trade of the EEC, imports from the United States have continued to rise. Increases have occurred principally in imports of feed grains, oilseeds, wheat, and animal feeds. Of total agricultural imports from world sources the United States accounted for the largest share--14 percent in 1965. Other principal sources for agricultural imports by the EEC are the Latin American Free Trade Association, other African countries not associated with the EEC, EEC-Associated Overseas Countries (including African associated countries), and Asian countries. Principal export markets for the EEC's agricultural exports are the EEC member-countries, the other European countries, and associated overseas countries of the EEC.

Five years ago, Japan became the largest foreign market for U.S. agricultural exports. The Japanese market--all commercial sales for dollars--may soon reach \$1 billion. The sharp rise in U.S. farm exports to Japan has paralleled that country's substantial industrial growth and increasing personal incomes, and reflects the limitations of Japanese land resources available for agricultural production. Japan must import much of its food needs to satisfy the rising demand of a predominantly urban population.

U.S. market development projects have contributed to the growth in farm exports to Japan. Market development programs have been carried out for cotton, wheat and wheat products, feed grains, soybeans and soybean products, tobacco, tallow, hides and skins, poultry products, raisins, citrus, dry peas, and lentils. The value of Japan's agricultural imports increased 60 percent from 1960 to 1965. The U.S. share was the largest each year, amounting to 34 percent in 1965.

D. Exports Under Food for Peace (Government-financed) Programs and Exports for Dollars. Exports under Food for Peace Programs in fiscal year 1966 totaled \$1,615 million, about 5 percent less than those during the preceding year. These exports averaged \$1.6 billion a year during 1961-66 with little annual variation. In 1966, they represented 24 percent of total exports of farm products compared with 28 percent a year earlier. Annual exports under

Government-financed programs in recent years were about \$0.2 billion larger than the 1956-60 average. Program shipments during fiscal year 1955 were at a lower level as shipments did not move under the programs in volume until the last half of the year. Food for Peace exports totaled nearly \$18 billion compared with total exports of farm products for dollars of \$40 billion during the 12-year period since P.L. 480 was enacted. The Food for Peace programs have promoted economic growth in the less-developed countries hastening the day when these countries will become partners in commercial trade.

Export Payment Assistance to U.S. Agricultural Exports. Dollar exports totaled a record \$5,066 million in 1966, 76 percent of total exports. An estimated 58 percent of total exports were dollar sales without Governmental assistance and 18 percent were dollar exports with the assistance of export payments in cash or in kind or were sales from Government-owned stocks at less-than-domestic market prices. Exports under Government programs represented 24 percent of total exports, including an estimated 15 percent of the total which was assisted by export payments, 4 percent which did not receive this form of assistance, and 5 percent which consisted of donations under Titles II and III, P.L. 480. Export payments amounted to over \$600 million in 1966 compared with less than \$500 million in 1965 and more than \$800 million in 1964. Larger exports of wheat and flour and a higher export payment rate for this grain largely accounted for the increase in export payments in 1966 from a year earlier. During the 12-year period, fiscal years 1955 through 1966, 48 percent of U.S. agricultural exports have been unassisted commercial sales for dollars, 21 percent dollar sales with the assistance of export payments, and the remaining 31 percent, program exports.

Revaluation and Retabulation of Title II Donations. Available reports of shipments under the Title II donations program include values at full reimbursement cost to CCC, reported by date of recording in the Fiscal Division of the Agricultural Stabilization and Conservation Service. To overcome the difficulties encountered in the preparation of reports of exports under Government programs because of the noncomparability of Title II shipment data with reports of exports from the Bureau of the Census, the revaluation of these shipments at estimated export market value and retabulation by date of export was undertaken from the 12 years 1955-66. During the past year, the Agricultural Stabilization and Conservation Service recorded numerous transfers of stocks in store abroad which took place during the 1960-65 period. These transfers were between Titles II and III, as well as between countries. The recording of transfers for this earlier period is now complete and has enabled the Trade Statistics and Analysis Branch to complete and prepare for publication fiscal year data. Calendar year data will be completed as soon as some of the source data become available. This revaluation will eliminate the numerous instances in which program shipments seemed to have exceeded total exports to a country because of the valuation at full reimbursement cost to CCC.

E. Analysis of World Agricultural Prices. Complete documentation of EEC variable grain levies was secured. Grain price formation and reporting in

Italy was observed first-hand. Indications are that Italy does not observe and report "prices received by farmers," as that concept is known in the United States. Thus, little is known about marketing margins from the point of first sale to secondary sales on the grain exchanges. Farm accounts of the type existing in the United States, West Germany, Switzerland and elsewhere are not available as a reliable source of information on farm prices. Only schedules obtained from annual interviews with farmers are available. Little information on grain marketings or deliveries is available for weighting such monthly, biweekly or weekly price series as are available, for the purpose of estimating seasonal or annual gross sales proceeds and seasonal or annual average prices. This situation is disappointing in view of Italy's importance as a market for U.S. feed grains. In 1965, U.S. supplied Italy with 2.4 million tons of feed grains, of which 2.2 million tons were corn. Imports of corn from the U.S. averaged only 0.5 million tons during the previous five years. This situation requires the most diligent research effort possible to develop more insight into the Italian grain price situation.

Material was collected for an appraisal of the role of the French Southwest, France's "Corn Belt," as a potential corn supplier to Italy. Some developments in connection with EEC grain price harmonization may stimulate corn production for export to Italy from Southwest France.

A system of price index numbers of principal U.S. agricultural exports and imports was developed. Prices (unit values, i.e., the quotients of values and quantities of principal commodities) for the most recent quarter and 12-month period were compared with those for like periods one year earlier. Also, the "terms" of trade were measured as the ratio of export price indexes and of import price indexes. The terms of trade of U.S. agriculture were favorable, import prices declined; export prices first increased but later declined since construction of these series began.

An analysis of price developments published in The World Agricultural Situation Review of 1965 and Outlook for 1966, at the beginning of the year, emphasized the decline in prices that had started in late 1963 or early 1964 and had been interrupted by a brief seasonal pickup in the fall of 1964. Nevertheless, as of late 1965, a number of individual prices showed strength.

F. Estimation of Costs and Benefits of Agricultural Protectionism. Under the Minnesota contract, economic models were built which aimed at estimating the cost of protection of grain production in the United Kingdom and of the feed grain economy in West Germany. Investigations under that contract continue.

G. Other. Services performed during the year included periodic briefings on the U.S. agricultural trade situation to key personnel in the Economic Research Service and the Foreign Agricultural Service. Information in regard to exports and/or imports was furnished for inclusion in the President's Report to Congress on the operation of P.L. 480, the Handbook of Agricultural Charts, Agricultural Statistics, the Statistical Abstract of the United States,

Agricultural Situation, Farm Index, Foreign Agriculture, and in publications of international organizations. Special reports were furnished the Office of Food for Peace, the Foreign Agricultural Service, and the Economic Research Service for various uses. Export outlook statements were a major part of the 1966 commodity outlook as presented at the 43rd Annual National Agricultural Outlook Conference.

The Branch participated in the work of the Budget Bureau Interagency Advisory Committee on Foreign Trade Statistics, including assistance in the establishment of new Census Bureau foreign trade commodity classification systems.

AREA NO. 4--TRADE STATISTICS AND ANALYSIS

PUBLICATIONS

A. U.S. Agricultural Trade Statistics

- (1) Foreign Agricultural Trade of the United States. "Export Highlights," "Import Highlights," and "Digests of Foreign Agricultural Trade of the United States." Oct. 1965-Sept. 1966. Average 16 pp., 10 issues.
- (2) _____. "U.S. Foreign Agricultural Trade by Countries, Calendar Year 1964." Supplement. Oct. 1965, 90 pp.
- (3) _____. "U.S. Foreign Agricultural Trade by Commodities, Fiscal Year 1964-65." Supplement. Dec. 1965, 40 pp.
- (4) _____. "Export Fact Sheet, Fiscal Year 1964-65," Dec. 1965. (Reprinted as ERS-For.-155, 5 pp.)
- (5) _____. "Import Fact Sheet, Fiscal Year 1964-65." Jan.-Feb. 1966. (Reprinted as ERS-For.-155, 6 pp.)
- (6) _____. "U.S. Foreign Agricultural Trade by Countries, Fiscal Year 1964-65." Supplement. May 1966, 91 pp.
- (7) _____. "U.S. Foreign Agricultural Trade by Commodities, Calendar Year 1965." Supplement. July 1966, 40 pp.

B. U.S. Agricultural Trade Situation

- (8) _____. "Exports Compared With Production." Oct. 1965, 2 pp.
- (9) _____. "Value of Agricultural Imports in 1965 was Little Changed from 1964." May 1966, 9 pp.
- (10) _____. "U.S. Agricultural Imports by Country, 1959-60 Through 1964-65." June 1966, 23 pp.
- (11) _____. "Imports of Fruits and Vegetables Under Quarantine, Fiscal Year 1964-65." June 1966, 14 pp.
- (12) _____. "Exports Compared With Imports, 1964 and 1965." July 1966, 3 pp.
- (13) _____. "Agricultural Exports Compared with Production." Sept. 1966, 3 pp.

- (14) _____. "Index to Foreign Agricultural Trade of the United States, July 1965-June 1966." Sept. 1966, 4 pp.
- (15) Corley, Joseph R. "U.S. Agricultural Exports to the European Economic Community, 1962-65." Foreign Agricultural Trade of the United States. July 1966, 7 pp.
- (16) _____. "U.S. Agricultural Exports: Calendar Years 1960-65." Foreign Agricultural Trade of the United States. Aug. 1966, 26 pp.
- (17) _____. "U.S. Agricultural Exports to the European Economic Community, Fiscal Years 1961-62 through 1965-66." Foreign Agricultural Trade of the United States. Sept. 1966, 10 pp.
- (18) DeBlois, Eleanor N. "Higher Commercial Sales Accounted for Near Record U.S. Agricultural Exports in Calendar Year 1965." Foreign Agricultural Trade of the United States. July 1966, 22 pp.
- (19) Rahe, Dewain H. "U.S. Agricultural Imports Declined 3 Percent in Fiscal 1964-65." Foreign Agricultural Trade of the United States. Oct. 1965, 7 pp.
- (20) _____. "U.S. Agricultural Exports Were Near Record Level in Fiscal Year 1965." Foreign Agricultural Trade of the United States. March-April 1966, 7 pp.
- (21) _____. "U.S. Agricultural Exports Reached All Time High of \$6.7 Billion in Fiscal Year 1965-66." Foreign Agricultural Trade of the United States. Aug. 1966, 7 pp.
- (22) Tontz, Robert L. Foreign Agricultural Trade: Selected Readings, Iowa State University Press, 500 pp.
- (23) _____ and Rahe, Dewain H. "U.S. Agricultural Export Prospects for Fiscal Year 1965-66." Foreign Agricultural Trade of the United States. Dec. 1965, 7 pp.
- (24) Warden, Thomas A. "U.S. Foreign Agricultural Trade in Calendar 1964 Reached \$10.4 Billion." Foreign Agricultural Trade of the United States. Nov. 1965, 47 pp.
- (25) _____. "Shipments of Farm Products to the European Economic Community and to Asia Increased the Value of U.S. Agricultural Exports Again in 1964-65." Foreign Agricultural Trade of the United States. May 1966, 24 pp.
- (26) _____. "U.S. Agricultural Imports by Origin, 1960-65." Foreign Agricultural Trade of the United States. Sept. 1966, 24 pp.

C. World Agricultural Trade Statistics

- (27) Kallemeyn, Norman R. "Seven Largest Agricultural Importers Take Nearly Two-Thirds of World Imports--U.S. Major Supplier." Foreign Agricultural Trade of the United States. Sept. 1966, 31 pp.
- (28) Warden, Thomas A. "Japan: World's Largest Importer of U.S. Agricultural Products." Foreign Agricultural Trade of the United States. Aug. 1966, 14 pp.
- (29) "Agricultural Trade of the European Economic Community, A Statistical Reference." Oct. 1966, ERS-For.-165.

D. Exports Under Food for Peace (Government-financed) Programs

- (30) DeBlois, Eleanor N. "High Level Dollar Exports Boost Total Exports of U.S. Farm Products for Second Consecutive Fiscal Year." Foreign Agricultural Trade of the United States. Dec. 1965 (Reprinted as ERS-For.-150, 22 pp.)
- (31) _____. "Export Payment Assistance to U.S. Agricultural Exports, Fiscal Year 1964-65." Foreign Agricultural Trade of the United States. June 1966, 16 pp.
- (32) Foreign Agricultural Trade of the United States, "Government Program Export Highlights, July-Dec. 1965." June 1966, 13 pp.
- (33) _____. "Government Program Export Highlights, July-March 1965-66." Aug. 1966, 7 pp.

E. Analysis of World Agricultural Prices

- (34) Hirsch, Hans G. "Review of 1965 Price Developments in the Foreign Agricultural Trade of the U.S." Foreign Agricultural Trade of the United States. Jan.-Feb. 1966 (Reprinted as ERS-For.-156, 8 pp.)
- (35) _____. "Calendar Year 1965 U.S. Agricultural Export Prices Up Slightly." Foreign Agricultural Trade of the United States. March-April 1966, 3 pp.
- (36) _____. "First Quarter 1966 U.S. Export and Import Prices Slightly Down." Foreign Agricultural Trade of the United States. Sept. 1966, 3 pp.

Line Project Check List--Reporting Year October 1, 1965 to September 30, 1966

Work and Line Project Number	Work and Line Project Titles	Work Locations During Past Year	Line Project Incl. in	
			Summary of Progress (Yes-No)	Area and Subheading
DTA 1	Foreign Economic Development Branch	Washington, D.C.	Yes	1-A,B,C,D, E,F,G
DTA 1-1	Analyses of the Role of Agriculture in Foreign Economic Development and Growth	Washington, D.C.	Yes	1-A
DTA 1-3	Analysis of Ways of Increasing Farm Pro- ductivity to Meet World Food Needs	Washington, D.C.	Yes	1-C,D
DTA 1-4	Effects of Foreign Economic Development on Demand for U.S. Farm Products	Washington, D.C.	Yes	1-E,F
(DTA-0-0-1-(AID))	Factors Associated with Differences and Changes in Agricultural Production in Underdeveloped Countries	Washington, D.C.	Yes	1-B
FDT-0-0-2 (AID)	Factors Associated with Differences and Changes in Agricultural Production in Greece	Greece	No	1-B
FDT-0-0-3 (AID)	Factors Associated with Differences and Changes in Agricultural Production in Taiwan	Taiwan	No	1-B
FDT-0-0-4 (AID) (C.A.)	Factors Associated with Differences and Changes in Agricultural Production in Mexico	Mexico	No	1-B
FDT-0-0-5 (AID)	Factors Associated with Differences and Changes in Agricultural Production in Nigeria	Nigeria	No	1-B
FDT-0-0-6 (AID)	Factors Associated with Differences and Changes in Agricultural Production in Brazil	Brazil	No	1-B
FDT-0-0-7 (AID)	Factors Associated with Differences and Changes in Agricultural Production in India	India	No	1-B
FDT-0-0-8 (AID) 1/	Factors Associated with Differences and Changes in Agricultural Production in Colombia	Colombia	No	1-B
S5-ERS-2(a)	Marketing Rice in Colombia	Bogota, Colombia	Yes	1-H
S5-ERS-3(k)	Economic Aspects of the Production, Marketing and Utilization of Corn and Other Feed Grains in Colombia	Medellin, Colombia	No	1-H
E8-ERS-1(k)	The Relation of Management and Planning to Success in Farming	Helsinki, Finland	No	1-H
E8-ERS-2(k)	Study of the Economics of Alternative Use of Land for Agriculture and Forestry	Helsinki, Finland	No	1-H
A10-ERS-1(k)	Social Factors Which Impede or Promote Agricultural Organization and Production	Hebrew University Jerusalem, Israel	Yes	1-H

Line Project Check List--Reporting Year October 1, 1965 to September 30, 1966

Work and Line Project Number	Work and Line Project Titles	Work Locations During Past Year	Line Project Incl. in	
			Summary of Progress (Yes-No)	Area and Subheading
A10-ERS-2(k)	Evaluation of Long-Term Programs for Agriculture with Respect to Require- ments and Supply of Capital	Hebrew University Jerusalem, Israel	No	1-H
A10-ERS-3(k)	Quantitative Analysis of Optimal Water Resource Development and Allocation	Hebrew University Jerusalem, Israel	No	1-H
A10-ERS-4(k)	Comparative Analyses of Processes of Agricultural Development and Moderni- zation in Israel	Hebrew University Jerusalem, Israel	Yes	1-H
A10-ERS-9(k)	Methods of Compilation of Agricultural Statistics in Israel	Hebrew University Jerusalem, Israel	No	1-H
A10-ERS-10(k)	Comprehensive Programming of Regional Economic Development	Hebrew University Jerusalem, Israel	No	1-H
S25-ERS-1(k)	Food Consumption in Relation to Family Income in the Rural Population in Spain	Madrid, Spain	No	1-H
A7-ERS-11(k)	A Study of the Impact of Changing Con- ditions on Grain Marketings Insti- tutions and Structure of Grain Markets	Punjab, India	No	1-H
A7-ERS-12(k)	Evaluation of the Impact of Land Reforms on the Structure of Land Holdings and Farm Production Potentials	Punjab, India	No	1-H
A7-ERS-14	The Structure and Behavior of Farm Prices in India	New Delhi, India	No	1-H
A17-ERS-2	Income Elasticity of Demand for Food Under Progressing Stages of Agri- cultural Development in Pakistan	Karachi, Pakistan	Yes	1-H
DTA 2	Foreign Economic Export Programs Research	Washington, D.C.	Yes	2-A
A7-DTA-1(a)	Analysis and Assessment of the Effectiveness of Title I, P.L. 480 Operations in India	Poona, India	Yes	2-A
A22-DTA-1(a) 2/	Analysis and Assessment of the Effectiveness of Title I, P.L. 480 Operations in Turkey	Ankara & Istanbul Turkey	Yes	2-A
E11-DTA-1(a) 2/	Analysis and Assessment of the Effectiveness of Title I, P.L. 480 Operations in Greece	Athens, Greece	Yes	2-A
E25-DTA-1(a)	Analysis and Assessment of the Effectiveness of Title I, P.L. 480 Operations in Spain	Madrid, Spain	Yes	2-A
DTA 3	International Monetary Research	Washington, D.C.	Yes	3-A,B,C
DTA 3-1	Analysis of the Role of Agricultural Credits in the Development of the Agri- cultural Economy of Foreign Countries	Washington, D.C.	Yes	3-C

Line Project Check List--Reporting Year October 1, 1965 to September 30, 1966

Work and Line Project Number	Work and Line Project Titles	Work Locations During Past Year	Line Project Incl. in	
			Summary of Progress (Yes-No)	Area and Subheading
FDT 3-2	P.L. 480 Transactions Entering the U.S. Balance of Payments	Washington, D.C.	Yes	3-B
FDT 3-3	Analysis of the External Financial Position of P.L. 480 Recipient Countries	Washington, D.C.	Yes	3-A
DTA 4	Trade Statistics and Analysis	Washington, D.C.	Yes	4-A,B,C,D, E,F
DTA 4-1	Analysis of U.S. Agricultural Trade	Washington, D.C.	Yes	4-A,B
DTA 4-2	Trade Analysis and Development of World Statistics on International Trade	Washington, D.C.	Yes	4-C
DTA 4-3	Exports Under Food-for-Peace (govern- ment-financed) Programs	Washington, D.C.	Yes	4-D
DTA 4-4	Analysis of World Agricultural Prices	Washington, D.C.	Yes	4-E
DTA 4-5 (Gr.)	Estimation of Costs and Benefits from Agricultural Protectionism in the Atlantic Community and Development of International Trading Arrangements Designed to Reduce Conflicts Between Domestic Agricultural Support and Foreign Trade in Livestock and Grain Products	Minneapolis, Minnesota	Yes	4-F
FDT 4-6 1/	Factors and Developments Affecting U.S. Agricultural Exports to the EEC	Washington, D.C.	No	4-C
FDT 5	International Trade Developments and Problems	Washington, D.C.	Yes	3-D,E
FDT 5-1	Statistical Analysis of Changes in Export Prices of Major Agricultural Commodities Entering World Trade	Washington, D.C.	Yes	3-E
FDT 5-2	Potential Meat and Grain Trade of the EEC	Washington, D.C.	Yes	3-D
FDT 5-3	Research on Import Demand for Oilseeds and Oilseed Products in Countries of the European Economic Community	Göttingen, Germany; EEC Countries and Washington, D.C.	Yes	3-D
FDT 5-4	Effects of Current Changes in the Live- stock and Grain Economy of France on Foreign Trade Patterns	Paris, France	Yes	3-D
FDT 5-5	Effects of Changing Price and Production Conditions in the Countries of the European Economic Community on Agri- cultural Output	Michigan State U. West Germany and Italy	Yes	3-D
FDT 5-6 1/	Trade Policies and Demand Relationships	Washington, D.C.	Yes	3-E

1/ Project pending approval.

2/ Discontinued May 1966.

